


Features

- Extremely wide measuring range
- Excellent measuring accuracy
- Real-time user feedback
- Built-in amplifier with acquisition system
- Start and stop triggers
- LAN connection
- Control & acquisition software included
- Cost-effective

Applications

- Biomechanics
- Basic research
- Posture and movement analysis

Overview		
Model	3D force plate 600400	
Dimensions	600 x 400 x 80 mm	
Load range	Fx, Fy, Fz	10 kN
Overload	Fx, Fy, Fz	15 kN
Interfaces	Ethernet interface Analog force output One start and one stop digital trigger	

Construction	
Sensors	Strain gauge / Aluminum
Top plate	Anodized aluminum
Bottom plate	Aluminum

Performance		
Linearity	Fx, Fy	<0.1 %
	Fz	<0.1 %
Hysteresis	Fx, Fy	<0.1 %
	Fz	<0.1 %
Cross-talk	Fz → Fx, Fy	<0.5 %
Drift	Fx, Fy, Fz	<1 N / h
Natural frequency	x-axis	≈230 Hz
	y-axis	≈300 Hz
	z-axis	≈190 Hz

Physical	
Mass	22 kg
Operating / storage temperature	10 ... 40°C / -25 ... 40°C
Operating / storage humidity	30 ... 70% (non condensing) / 0 ... 95% (non condensing)
Ingress protection	IP 00
Air pressure	700 ... 1060 hPa (max 3000m altitude)
Anchorage	Up to 8 x M10

Electrical	
Supply voltage	12 ... 17 VDC
Current consumption	500 mA

Amplification			
Amplifier		8 channels: 4 x Fz, 2 x Fy, 2 x Fx	
Analog filter		Bessel 8-pole low pass filter (cut-off frequency: 125 Hz)	
Range	1 to 7	x1 / x2 / x4 / x8 / x16 / x32 / x64	
		Range 1	Range 7
Measuring range	Fx, Fy	-9 to 9 kN	-0.14 to 0.14 kN
	Fz	-1 to 8 kN	-0.02 to 0.13 kN
Resolution	Fx, Fy	600 mN	9 mN
	Fz	280 mN	4 mN
Noise (peak-to-peak)	Fx, Fy	±0.3 N	±0.3 N
	Fz	±1.5 N	±0.3 N
Sensitivity at analog interface	Fx, Fy	2000 N/V	30 N/V
	Fz	1000 N/V	15 N/V

Ethernet interface	
Connector	RJ-45
Speed	10 / 100 Mbit/s
Analog-to-digital converter	Built-in, 8 channels, 16-bit resolution, simultaneous sampling
Sampling rate	100Hz ... 10 kHz

Analog output		
Connector		9-pin Sub-D
Output channels		8 channels: 4x Fz, 2x Fy, 2x Fx
Output range	Fx, Fy, Fz	0 to 10 V
Output type	Fx, Fy, Fz	Single-ended ground referenced

Digital input		
Auto-zero	BNC	5V digital TTL/CMOS, isolated
Trigger in	BNC	5V digital TTL/CMOS, isolated
Auxiliary in	BNC	5V digital TTL/CMOS, isolated, can be used as trigger

Digital output		
Sync out	BNC	5V digital TTL/CMOS, isolated

Software	
Data acquisition	3D-Force Plate ©
Functions	data monitoring, acquisition and storage, real-time biofeedback, visualization of acquired data, configuration, recalibration
Compatibility	Windows 7 / 8 / 10
Export file format	Native binary, tab delimited text